

## CLAIMS

What Is Claimed Is:

1. A method of access control in a communication network comprising the steps of:  
determining a load status of the network between a call originating node and a call terminating node;  
determining whether the load status permits a specified quality of service; and  
if the specified quality of service is permitted, establishing a transport connection between the call originating node and the call terminating node.
2. A method of access control in a network comprising the steps of:  
sending a probe packet through the network from a first node to at least one other node;  
updating a portion of the probe packet at each node based on the load status of the node;  
determining whether the load status permits a specified quality of service; and  
if the specified quality of service is permitted, establishing a transport connection between the at least two nodes in the network.
3. The method of claim 2, wherein the step of sending a probe packet through the network is performed continuously.
4. The method of claim 2, wherein the step of sending a probe packet through the network is performed at pre-determined times.
5. The method of claim 2, wherein the step of sending a probe packet through the network is performed in response to a network event.
6. The method of claim 2, wherein the step of sending a probe packet is performed for each of a plurality of traffic classes.

1 7. An access control system in a network comprising:  
2 at least one load measurement proxy, which probes the network to determine the  
3 congestion state of the network;  
4 a bandwidth broker server in communication with the at least one load measurement  
5 proxy and correlating the determined congestion state information; and  
6 a bandwidth broker client in communication with the bandwidth broker server and an  
7 application, wherein the bandwidth broker client queries the bandwidth broker server based  
8 on requirements of the application.

1 8. The access control system of claim 7, wherein the requirements of the application  
2 include at least two node addresses and a quality of service.

1 9. The access control system of claim 7, wherein the requirements of the application  
2 include at least one of an application traffic class, a peak bit rate, a packet delay, a delay  
3 variation, a packet loss, and a guaranteed bit rate.

1 10. The access control system of claim 7, wherein the load measurement proxy  
2 continuously probes the network.

1 11. The access control system of claim 7, wherein the load measurement proxy probes the  
2 network at predefined intervals.

1 12. The access control system of claim 7, wherein the load measurement proxy probes the  
2 network in response to a network event.

1 13. The access control system of claim 7, wherein the load measurement proxy  
2 determines the congestion state of the network for each of a plurality of traffic classes.

1 14. An access control system in a network comprising:  
2 at least one load measurement proxy, which probes the network to determine the  
3 congestion state of the network;

4           a bandwidth broker server in communication with the at least one load measurement  
5           proxy and correlating the determined congestion state information; and  
6           a plurality of bandwidth broker clients in communication with the bandwidth broker  
7           server and a respective one of a plurality of applications, wherein each of the plurality of  
8           bandwidth broker clients queries the bandwidth broker server based on requirements of the  
9           respective one of a plurality of applications.